

# DERMOCHLORELLA D - DERMOCLORELLA DP

## Anti-Vascular Imperfections Anti-Dark Circles

**CODIF**  
Recherche & Nature

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Angiogenesis is defined as the formation of new blood vessels from pre-existing vessels. This excess growth of blood vessels is the cause of unattractive skin problems: acne rosacea, vascular imperfections and dark circles under the eyes. All these defects are due to the dilation of superficial veins that become visible on the surface of the skin.

Acne rosacea is observed as chronic redness, especially on the nose and cheeks.

Vascular imperfections often result in the appearance of unsightly "spider veins" on the legs. They can become varicose veins due to the stagnation of blood in the lower

limbs. Hormone changes (contraception, pregnancy, etc.), being constantly standing or sitting and ageing contribute to the formation of these small imperfections.

Dark circles are due to small veins under the eyes which tend to dilate. Blood circulates badly. And since the skin is very thin in this site, they rapidly appear!

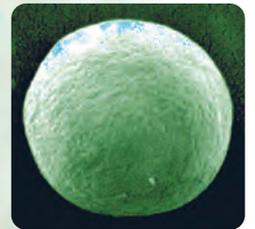
If we add stress, lack of sleep and pollution, that is all we see!

To make us more beautiful from the head to the feet, CODIF Recherche & Nature proposes:

**DERMOCHLORELLA D** and **DERMOCHLORELLA DP**.

**DERMOCHLORELLA D / DP** is an extract of a green microalgae, *Chlorella vulgaris* that is very rich in amino acids and oligopeptides.

INCIUSA	INCI EUROPE	N° CAS	N° EINECS
Water (and) Chlorella vulgaris extract	Aqua Chlorella vulgaris	7732-18-5 91079-57-1	231-791-2 293-445-7

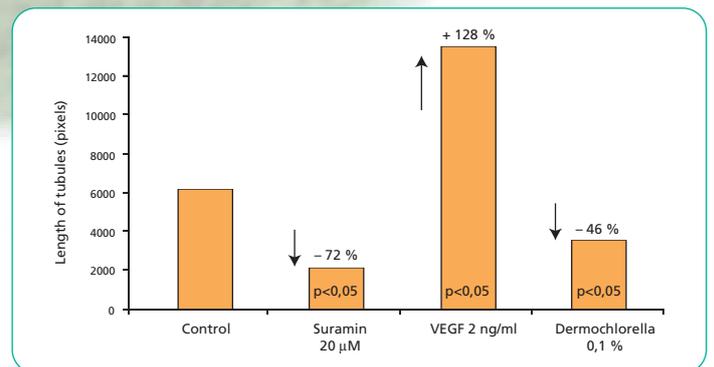


+ *Preservatives*: Propylene glycol / Phenoxyethanol / Chlorphenesin / Methylparaben (2.12 - 2.87%) for DERMOCLORELLA D (ALG057)  
Phenoxyethanol (~1%) for DERMOCLORELLA DP (ALG058)

### In vitro test

#### Effect on angiogenesis

The effect of **DERMOCHLORELLA D / DP** on angiogenesis was studied measuring the length of blood vessels using an in vitro model composed of human endothelial cells co-cultured with human fibroblasts. Vascular endothelial growth factor or VEGF and Suramin were used as reference products. VEGF is known to active vessel formation (+128%) while Suramin has an inhibitory effect on this mechanism (-72%).



• **DERMOCHLORELLA D / DP**, tested at 0.1% significantly decrease the length of vessels: **-46%**.

• Thanks to its anti-angiogenic action, **DERMOCHLORELLA D/DP** can be used to improve skin problems such as acne rosacea.



CONTROL



SURAMIN



VEGF



DERMOCH. D / DP

### Clinical test

#### Effect on spider veins

17 women between 35 and 65 years old (average age 49 years) applied twice a day for 84 days a cream containing **DERMOCHLORELLA D / DP** at 1%.

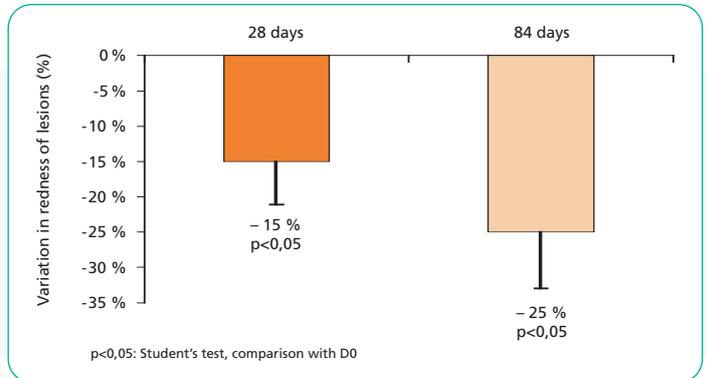
The volunteers had apparent lesions related to a bad venous function with heavy leg sensation: small varicose veins, small stellar angiomas, varicosities, petechia.

The effect of the product on spider veins was evaluated after 28 and 84 days of application.

- **DERMOCHLORELLA D / DP** at 1% visibly decreases the redness of the vascular lesions:

- ▶ **-15%** on average and up to **-64%** after 28 days of use,
- ▶ **-25%** on average and up to **-77%** after 84 days of use.

- Effect observed in **75%** of volunteers at the end of the test.



D0



D84

For the beauty of your legs, decrease vascular imperfections with:  
**DERMOCHLORELLA D/DP**

### Clinical test

#### Effect on dark circles

15 women between 50 and 65 years old (average age 57 years) applied twice a day for 28 days a cream containing **DERMOCHLORELLA D / DP** at 1%. The effect of the product on the dark circles was measured by colorimetric analysis.

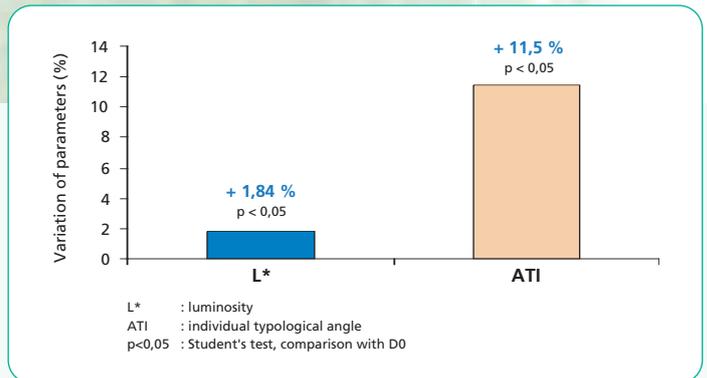
The skin colour was defined according to its luminosity L\* and its individual typological angle or ITA. It defines the degree of pigmentation of the skin of an individual.

The higher the ITA, the lighter the skin.

- **DERMOCHLORELLA D / DP** increases the transparency of the skin: **+1.84%** on average and up to **+6.8%** after 28 days of use.

- **DERMOCHLORELLA D / DP** decreases the pigmentation of the skin: **+11.5%** on average and up to **+113%** after 28 days of use.

- Effect observed in **73%** of volunteers at the end of the test.



D0



D28

With **DERMOCHLORELLA D/DP**, dark circles are visibly attenuated!

Thanks to its vasoconstrictive action, **DERMOCHLORELLA D / DP** may be combined for greater efficacy with **CONCENTRE CORALLINE** (CODIF Recherche & Nature active ingredient) which decreases the microcirculation, preventing the vasodilation of capillaries responsible for the redness.